

REMARKS

The Office Action dated June 25, 2003, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

As presented above, Applicants herein amend claims 1, 3-5, 7, 12-13, 15-19, and 22-26 and cancel claim 14. As such, claims 1-13 and 15-26 are pending in the application. In the Office Action, claims 1-26 were rejected under 35 U.S.C. §102(b). This rejection is traversed below. Applicants request reconsideration of the rejection in view of the following and submit claims 1-13 and 15-26 for reconsideration.

Rejection under 35 U.S.C. §102(b)

Claims 1-26 were rejected under 35 U.S.C. §102(b) as being anticipated by Mueckenheim et al. (US 2001/0019543). However, Applicants traverse this rejection for at least the following reasons.

As amended, independent claim 1, upon which claims 2-13 and 15-21 depend, is generally directed toward a method for controlling a radio bearer parameter of a first radio bearer to be established or maintained between a mobile terminal and a first access-network node in a first cell of a cellular radio access network. The method includes determining a current value of a load parameter indicative of an air interface load of the first cell and determining a current first target or limit value of at least one radio access bearer parameter of a radio access bearer. The method also includes establishing a

second radio bearer with optimized radio bearer parameters and switching from the first radio bearer to the second radio bearer. The first access-network node communicates with a core-network node in a core network to establish or maintain at least one radio access bearer between the mobile terminal and the core-network node.

As amended, independent claim 22 is generally directed toward a Radio Bearer Control unit for controlling at least one radio bearer parameter. The radio bearer control unit includes a parameter retrieval unit that communicates with an external admission control unit for ascertaining a current first target or limit value of a radio access bearer parameter. The radio bearer control unit also includes a performance data retrieval unit that communicates with an external radio network monitoring statistics unit for receiving a current measured value of an air interface load parameter. The radio bearer control unit also includes a radio bearer parameter control unit that communicates with the parameter retrieval unit and the performance data retrieval unit and selects a second target or limit value of a radio bearer parameter based upon the first target or limit value and the current value of the air interface load parameter. The radio bearer control unit also includes a radio bearer establishing unit that establishes a second radio bearer with optimized radio bearer parameters and a switching unit that switches from the first radio bearer to the second radio bearer.

As amended, independent claim 23 is generally directed toward an admission control unit that includes a parameter retrieval unit that communicates with an external admission control unit for ascertaining a current first target or limit value of a radio

access bearer parameter. The admission control unit also includes a performance data retrieval unit that communicates with an external radio network monitoring statistics unit for receiving a current measured value of an air interface load parameter. The admission control unit further includes a radio bearer parameter control unit that communicates with the parameter retrieval unit and the performance data retrieval unit and selects a second target or limit value of a radio bearer parameter based upon the first target or limit value and the current value of the air interface load parameter. The admission control unit also includes a radio bearer establishing unit that establishes a second radio bearer with optimized radio bearer parameters and a switching unit that switches from the first radio bearer to the second radio bearer.

As amended, claim 24 is generally directed toward a radio network controller that includes a parameter retrieval unit that communicates with an external admission control unit for ascertaining a current first target or limit value of a radio access bearer parameter. The radio network controller also includes a performance data retrieval unit that communicates with an external radio network monitoring statistics unit for receiving a current measured value of an air interface load parameter. The radio network controller further includes a radio bearer parameter control unit that communicates with the parameter retrieval unit and the performance data retrieval unit and selects a second target or limit value of a radio bearer parameter based upon the first target or limit value and the current value of the air interface load parameter. The radio network controller also includes a radio bearer establishing unit that establishes a second radio bearer with

optimized radio bearer parameters and a switching unit that switches from the first radio bearer to the second radio bearer.

As amended, claim 25 is generally directed toward a system for controlling a radio bearer parameter of a first radio bearer to be established or maintained between a mobile terminal and a first access-network node in a first cell of a cellular radio access network. The system includes a first determining means for determining a current value of at least one load parameter indicative of an air interface load of a first cell and a second determining means for determining a current first target or limit value of a radio access bearer parameter of a radio access bearer. The system also includes a selecting means for selecting a second target value or limit value of the radio bearer parameter based upon the first target or limit value and the current value of the load parameter. Additionally, the system includes an establishing means for establishing a second radio bearer with optimized radio bearer parameters and a switching means for switching from the first radio bearer to the second radio bearer. The first access-network node communicates with a core-network node in a core network to establish or maintain the at least one radio access bearer between the mobile terminal and the core-network node.

As amended, claim 26 is generally directed toward a radio bearer control unit for controlling a radio bearer parameter. The radio bearer control unit includes a parameter retrieval means for communicating with an external admission control unit for ascertaining a current first target or limit value of a radio access bearer parameter. The radio bearer control unit also includes a performance data retrieval means for

communicating with an external radio network monitoring statistics unit for receiving at least one current measured value of an air interface load parameter. The radio bearer control unit further includes a an establishing means for establishing a second radio bearer with optimized radio bearer parameters and a switching means for switching from the first radio bearer to the second radio bearer.

Each of the foregoing independent claims recite limitations that are not disclosed or suggested by Mueckenheim.

Mueckenheim discloses a radio resource method and apparatus that involves allocating transmission channels to and from a node based on the system load requirement. The load requirement is determined from the quality of service requirement which, in turn, is assessed from the data rate, the bit energy to noise power ratio and the signal classification produced by a converter and sorter in response to signal transmission requests. A maximum load generator delivers the maximum load from these parameters. A core calculator and assignor performs a predetermined algorithm on the outputs of the converter and sorter and the maximum load generator and in response thereto controls a channel selector which selects the channels to and from node. See the Mueckenheim Abstract.

However, Mueckenheim fails to disclose or suggest, at least, “establishing a second radio bearer with optimized radio bearer parameters; and switching from said first radio bearer to said second radio bearer” as recited in claim 1. In support of the §102(b) rejection with respect to the foregoing limitation, the Office Action references

Mueckenheim paragraphs [0073]-[0075]. Nevertheless, Mueckenheim fails disclose or suggest, at least, this limitation.

For example, in paragraphs [0073]-[0075], Mueckenheim discloses a channel switch that directs signals from each incoming channel along a selected one of a plurality of outgoing channels under the control of a channel allocation device. The channel allocation device executes an algorithm that assigns transmission parameters to the channel. Accordingly, though the Mueckenheim channel switch is disclosed as directing a signal to an outgoing channel, Mueckenheim fails to disclose the channel switch, or other device, as capable of “establishing a second radio bearer with optimized radio bearer parameters; and switching from said first radio bearer to said second radio bearer.” Not only does Mueckenheim fail to disclose a device that performs this limitation, but Mueckenheim fails to disclose contemplation of the logical instructions for performing the same. In other words, it would be impossible to perform “establishing a second radio bearer with optimized radio bearer parameters; and switching from said first radio bearer to said second radio bearer” with a switch that merely directs signals from an incoming channel to an outgoing channel.

Additional exploration of Mueckenheim further highlights this distinction. In, Mueckenheim, an event, such as a request from a core network, triggers the RRA algorithm. See paragraph [0036]. The algorithm converts QoS data corresponding to the request into a data rate and a noise to power ratio, and sorts the request into a real-time transfer class, or a non-real-time transfer class. See paragraphs [0042] and [0045]. The

algorithm also evaluates the current load of the system and the maximum load corresponding to the request. See paragraph [0045] and [0046].

Then, the algorithm evaluates and assigns the transmission parameters based upon the current load of the system and the maximum load of the request. See paragraph [0055]. *Upon completion of the foregoing, the algorithm rests.* See paragraph [0062]. Indeed, Mueckenheim explicitly states that this algorithm will *not* be executed unless upon reception of another request. See paragraph [0062]. As such, Mueckenheim fails to present the logical instructions, in addition to a functional device discussed above, to optimize the parameters of a second channel and switch from the first channel to the second channel.

Accordingly, Mueckenheim fails to disclose or suggest, at least, “establishing a second radio bearer with optimized radio bearer parameters; and switching from said first radio bearer to said second radio bearer” as recited in claim 1. For at least this reason, Applicants respectfully request that the §102(b) rejection of claim 1 be withdrawn. Similarly, Applicants request that the §102(b) rejection of independent claims 22, 23, 24, 25, and 26 be withdrawn on similar grounds since each claim contains similar limitations, though each claim has its own scope. Also, Applicants respectfully request that the §102(b) rejection of dependent claims 2-13 and 15-21 be withdrawn for at least their dependency from claim 1.

Conclusion

In light of the foregoing, Applicants respectfully request that all of the rejections presented in the Office Action be withdrawn. It is also respectfully requested that the application pass to issue with the allowance of claims 1-13 and 15-26. If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
Additional Claim Fee Transmittal
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